

Limited and Temporary Degradation of Tier 3 Waters

Excerpts from Tetra Tech's June 22, 2007 *Technical Memorandum #2—Stormwater Nondegradation Analysis Project* prepared for the Minnesota Pollution Control Agency

LIMITED AND TEMPORARY DEGRADATION OF TIER 3 WATERS

The state of California's implementation policy expressly states that discharges that are temporally or spatially (i.e., mixing) limited are exempt from antidegradation review, therefore considered insignificant. No guidelines are provided to measure this limitation, only best professional judgment is required to make the determination.

Missouri has a definition of temporary degradation for Tier 3 waters:

Degradation that is non-permanent and the effects can be regarded as insignificant following a review of the a) length of time during which water quality will be lowered, b) percent change in ambient conditions, c) parameters affected, d) likelihood for long term water quality benefits to the segment (e.g., as may result from dredging of contaminated sediments), e) degree to which achieving the applicable Water Quality Standards (WQS) during the proposed activity may be at risk, and f) potential for any residual long-term influences on existing uses.

The EPA Region 8 *Antidegradation Implementation* manual contains a nonbinding general rule that defines activities with durations of less than one month as temporary. The EPA *Water Quality Standards Handbook* notes that the Tier 3 rule allows "limited activities that result in temporary and short-term" impacts:

EPA interprets this provision to mean no new or increased discharges to ONRWs and no new or increased discharge to tributaries to ONRWs that would result in lower water quality in the ONRWs. The only exception to this prohibition, as discussed in the preamble to the Water Quality Standards Regulation (48 F.R. 51402), permits States to allow some limited activities that result in temporary and short-term changes in the water quality of ONRW. Such activities must not permanently degrade water quality or result in water quality lower than that necessary to protect the existing uses in the ONRW. It is difficult to give an exact definition of "temporary" and "short-term" because of the variety of activities that might be considered. However, in rather broad terms, EPA's view of temporary is weeks and months, not years. The intent of EPA's provision clearly is to limit water quality degradation to the shortest possible time. If a construction activity is involved, for example, temporary is defined as the length of time necessary to construct the facility and make it operational. During any period of time when, after opportunity for public participation in the decision, the State allows temporary degradation, all practical means of minimizing such degradation shall be implemented.

The majority of states surveyed do have definitions of limited and temporary impacts for Tier 3 waters (Pennsylvania, Washington, Oregon, New Mexico, West Virginia) that generally follow the EPA guidelines above.

West Virginia rules prohibit any lowering of water quality for Tier 3 waters unless it is limited and temporary, as determined by the Secretary of the DEP on a case-by-case basis. The state's antidegradation implementation procedures provide more details in the review process:

In approving short term, limited effect activities, DEP will ensure that:

- All practical means to minimize the impacts have been applied
- There will be no permanent degradation of the receiving water segment
- Tier 1 protection requirements will be met
- Determinations to permit activities that may have short term, limited effects will be made on a case-by-case basis and shall be made after consideration of the following factors:

- The length of time during which the water quality will be lowered;
- The percent change in ambient concentrations;
- The parameters affected;
- The likelihood for long-term water quality benefits to the segment (e.g., as may result from dredging of contaminated sediments);
- The degree to which achieving applicable water quality standards during the proposed activity may be at risk;
- The potential for any residual long-term influences on existing uses; and
- The cumulative impacts from all sources for the parameters affected.

Washington has procedures for allowing limited degradation in Tier 3 waters as follows:

The criteria and special conditions established in WAC 173-201A-200 through 173-201A-260, 173-201A-320, 173-201A-602 and 173-201A-612 may be modified for a specific water body on a short-term basis (e.g., actual periods of nonattainment would generally be limited to hours or days rather than weeks or months) when necessary to accommodate essential activities, respond to emergencies, or to otherwise protect the public interest, even though such activities may result in a temporary reduction of water quality conditions. (1) A short-term modification will:

(a) Be authorized in writing by the department, and conditioned, timed, and restricted in a manner that will minimize degradation of water quality, existing uses, and designated uses. (b) Be valid for the duration of the activity requiring modification of the criteria and special conditions in WAC 173-201A-200 through 173-201A-260, 173-201A-602 or 173-201A-612, as determined by the department. (c) Allow degradation of water quality if the degradation does not significantly interfere with or become injurious to existing or designated water uses or cause long-term harm to the environment. (d) In no way lessen or remove the proponent's obligations and liabilities under other federal, state, and local rules and regulations.

(2) The department may authorize a longer duration where the activity is part of an ongoing or long-term operation and maintenance plan, integrated pest or noxious weed management plan, water body or watershed management plan, or restoration plan.



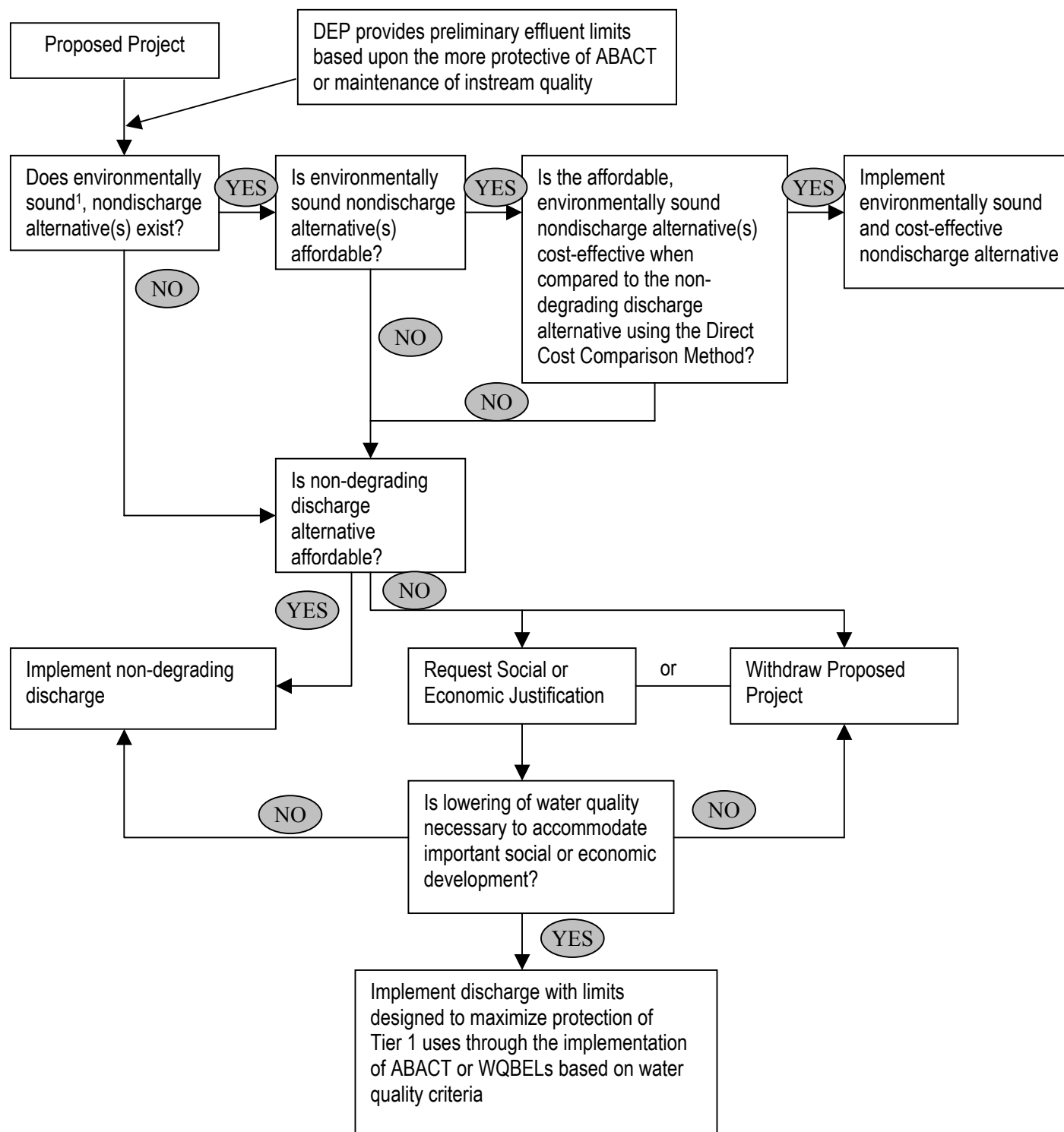
WATER QUALITY ANTIDEGRADATION IMPLEMENTATION GUIDANCE



COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection

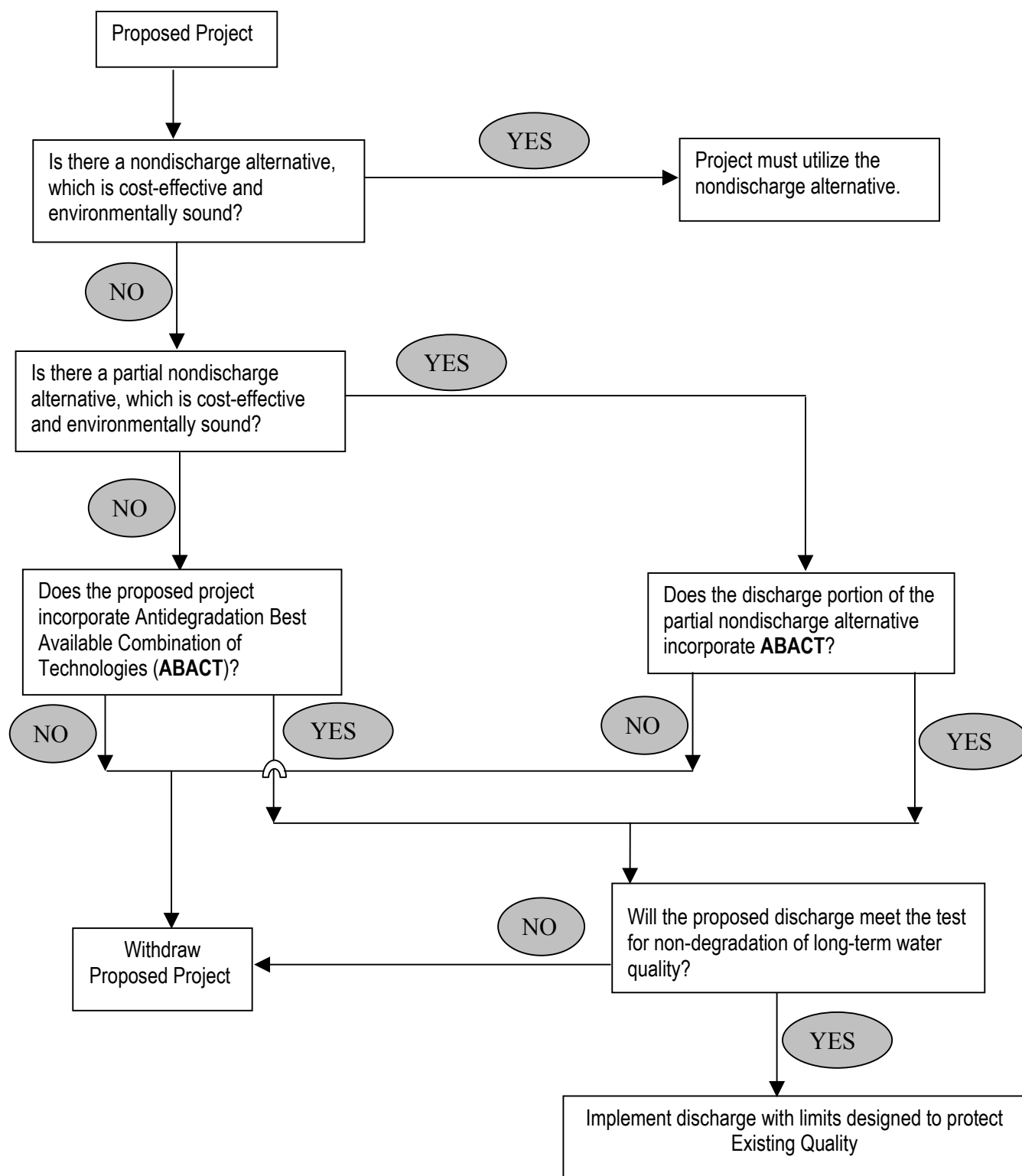
For more information, visit DEP directly at www.dep.state.pa.us
or through the PA PowerPort at www.state.pa.us

**FIGURE 3
GENERALIZED PERMIT REVIEW PROCESS
FOR
PROPOSED DISCHARGES TO HQ WATERS**



¹ Alternative, produces more environmental benefits than harms.

**FIGURE 4
GENERALIZED PERMIT REVIEW PROCESS
FOR
PROPOSED DISCHARGES TO EV WATERS**



*Issue #3: ONRW***Pennsylvania (2004)**

(a) Qualifying as a High Quality Water. A surface water that meets one or more of the following conditions is a High Quality Water.

(1) *Chemistry.*

- (i) The water has long-term water quality, based on at least 1 year of data which exceeds levels necessary to support the propagation of fish, shellfish and wildlife and recreation in and on the water by being better than the water quality criteria in § 93.7, Table 3 (relating to specific water quality criteria) or otherwise authorized by § 93.8a(b) (relating to toxic substances), at least 99% of the time for the following parameters: dissolved oxygen, aluminum, iron, dissolved nickel, dissolved copper, dissolved cadmium, temperature, pH, dissolved arsenic, ammonia, nitrogen, dissolved lead, dissolved zinc
- (ii) The Department may consider additional chemical and toxicity information, which characterizes or indicates the quality of a water, in making its determination.

(2) *Biology.* One or more of the following shall exist:

(i) *Biological assessment qualifier.*

- (A) The surface water supports a high quality aquatic community based upon information gathered using peer-reviewed biological assessment procedures that consider physical habitat, benthic macroinvertebrates or fishes based on *Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish*, Plafkin, et al., (EPA/444/4- 89-001), as updated and amended. The surface water is compared to a reference stream or watershed, and an integrated benthic macroinvertebrate score of at least 83% shall be attained by the referenced stream or watershed.
- (B) The surface water supports a high quality aquatic community based upon information gathered using other widely accepted and published peer-reviewed biological assessment procedures that the Department may approve to determine the condition of the aquatic community of a surface water.
- (C) The Department may consider additional biological information which characterizes or indicates the quality of a water in making its determination.

- (ii) *Class A wild trout stream qualifier.* The surface water has been designated a Class A wild trout stream by the Fish and Boat Commission following public notice and comment.

(b) Qualifying as an Exceptional Value Water. A surface water that meets one or more of the following conditions is an Exceptional Value Water:

- (1) The water meets the requirements of subsection (a) and one or more of the following:

Issue #3: ONRW

- (i) The water is located in a National wildlife refuge or a State game propagation and protection area.
- (ii) The water is located in a designated State park natural area or State forest natural area, National natural landmark, Federal or State wild river, Federal wilderness area or National recreational area.
- (iii) The water is an outstanding National, State, regional or local resource water.
- (iv) The water is a surface water of exceptional recreational significance.
- (v) The water achieves a score of at least 92% (or its equivalent) using the methods and procedures described in subsection (a)(2)(i)(A) or (B).
- (vi) The water is designated as a “wilderness trout stream” by the Fish and Boat Commission following public notice and comment.

(2) The water is a surface water of exceptional ecological significance.

Washington (2003)**173-201A-330****Tier III — Protection of outstanding resource waters.**

Where a high quality water is designated as an outstanding resource water, the water quality and uses of those waters must be maintained and protected. As part of the public process, a qualifying water body may be designated as Tier III(A) which prohibits any and all future degradation, or Tier III(B) which allows for de minimis (below measurable amounts) degradation from well-controlled activities.

(1) To be eligible for designation as an outstanding resource water in Washington, one or more of the following must apply:

- (a) The water is in a relatively pristine condition (largely absent human sources of degradation) or possesses exceptional water quality, and also occurs in federal and state parks, monuments, preserves, wildlife refuges, wilderness areas, marine sanctuaries, estuarine research reserves, or wild and scenic rivers.
- (b) The water has unique aquatic habitat types (for example, peat bogs) that by conventional water quality parameters (such as dissolved oxygen, temperature, or sediment) are not considered high quality, but that are unique and regionally rare examples of their kind.
- (c) The water has both high water quality and regionally unique recreational value.
- (d) The water is of exceptional statewide ecological significance; or

Issue #3: ONRW

(e) The water has cold water thermal refuges critical to the long-term protection of aquatic species. For this type of outstanding resource water, the nondegradation protection would apply only to temperature and dissolved oxygen.

(2) Any water or portion thereof that meets one or more of the conditions described in subsection (1) of this section may be designated for protection as an outstanding resource water. A request for designation may be made by the department or through public nominations that are submitted to the department in writing and that include sufficient information to show how the water body meets the appropriate conditions identified in this section.

(3) After receiving a request for outstanding resource water designation, the department will:

(a) Respond within sixty days of receipt with a decision on whether the submitted information demonstrates that the water body meets the eligibility requirements for an outstanding resource water. If the submitted information demonstrates that the water body meets the eligibility requirements, the department will schedule a review of the nominated water for designation as an outstanding resource water. The review will include a public process and consultation with recognized tribes in the geographic vicinity of the water.

(b) In determining whether or not to designate an outstanding resource water, the department will consider factors relating to the difficulty of maintaining the current quality of the water body. Outstanding resource waters should not be designated where substantial and imminent social or economic impact to the local community will occur, unless local public support is overwhelmingly in favor of the designation. The department will carefully weigh the level of support from the public and affected governments in assessing whether or not to designate the water as an outstanding resource water.

(c) After considering public comments and weighing public support for the proposal, the department will make a final determination on whether a nominated water body should be adopted into this chapter as an outstanding resource water.

(4) A designated outstanding resource water will be maintained and protected from all degradation, except for the following situations:

(a) Temporary actions that are necessary to protect the public interest as approved by the department.

(b) Treatment works bypasses for sewage, waste, and stormwater are allowed where such a bypass is unavoidable to prevent the loss of life, personal injury, or severe property damage, and no feasible alternatives to the bypass exist.

(c) Response actions taken in accordance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), as amended, or similar federal or state authorities, to alleviate a release into the environment of substances which may pose an imminent and substantial danger to public health or welfare.

Issue #3: ONRW

- (d) The sources of degradation are from atmospheric deposition.
- (5) Outstanding resources waters can be designated for either Tier III(A) or Tier III(B) protection.
 - (a) Tier III(A) is the highest level of protection and allows no further degradation after the waters have been formally designated Tier III(A) under this chapter.
 - (b) Tier III(B) is the second highest level of protection for outstanding resource waters and conditionally allows minor degradation to occur due to highly controlled actions. The requirements for Tier III(B) are as follows:
 - (i) To meet the goal for maintaining and protecting the quality of Tier III(B) waters, sources of pollution, considered individually and cumulatively, are not to cause measurable degradation of the water body.
 - (ii) Regardless of the quality of the water body, all new or expanded point sources of pollution in Tier III(B) waters must use applicable advanced waste treatment and control techniques that reasonably represent the state of the art and must minimize the degradation of water quality to nonmeasurable levels where total elimination is not feasible. Nonpoint sources must use all applicable structural and nonstructural BMPs with the goal of reducing the degradation of water quality to nonmeasurable levels where total elimination is not feasible.

West Virginia (2008)

4.I.c. Tier 3 Protection. In all cases, waters which constitute an outstanding national resource shall be maintained and protected and improved where necessary. Outstanding national resource waters include, but are not limited to, all streams and rivers within the boundaries of Wilderness Areas designated by The Wilderness Act (16 U.S.C. 9 113 1 et seq.) within the State, all Federally designated rivers under the "Wild and Scenic Rivers Act", 16 U.S.C. §1271 et seq.; all streams and other bodies of water in state parks which are high quality waters or naturally reproducing trout streams; waters in national parks and forests which are high quality waters or naturally reproducing trout streams; waters designated under the "National Parks and Recreation Act of 1978", as amended; and pursuant to subsection 7.1 of 60CSR5, those waters whose unique character, ecological or recreational value, or pristine nature constitutes a valuable national or state resource.

Additional waters may be nominated for inclusion in that category by any interested party or by the Secretary on his or her own initiative. To designate a nominated water as an outstanding national resource water, the Secretary shall follow the public notice and hearing provisions as provided in 46 C.S.R. 6.